

1. (Four Times Amended) A method of detecting one of electromagnetic radiation in the optical range and nuclear radiation, comprising the steps of:

exposing a microcantilever to a non-contact source of electromagnetic radiation, the microcantilever having at least one physical property affected by electromagnetic radiation;

monitoring electromagnetic radiation-induced changes in the at least one physical property, the changes cause a response selected from the group consisting of a bending of the microcantilever, a shift in resonance frequency of the microcantilever, and a combination thereof; and

correlating changes in the at least one physical property to a measure of the electromagnetic radiation.

10. (Amended) A method according to claim 7, further comprising [placing] making the microcantilever part of [in] a capacitor having a capacitance which varies with movement of the microcantilever, and the correlating step includes correlating changes in capacitance to the presence of radiation.

17. (Four Times Amended) An apparatus for detecting one of electromagnetic radiation in the optical range and nuclear radiation, comprising:

a radiation sensor having an element exposed to a non-contact source of electromagnetic radiation, the sensor having at least one physical property affected by the electromagnetic radiation;

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means for monitoring ~~electromagnetic~~ radiation-induced changes in the at least one physical property, the changes cause a response selected from the group consisting of a bending of the microcantilever, a shift in resonance frequency of the microcantilever, and a combination thereof; and

means for correlating changes in the at least one physical property to a measure of the electromagnetic radiation.

**2724.** (Twice Amended) An apparatus for detecting [electromagnetic and] nuclear radiation, comprising:

a radiation sensor having an element exposed to a source of radiation, the sensor having at least one physical property affected by radiation;

means for monitoring radiation-induced changes in the at least one physical property of the sensor; and

means for correlating changes in the at least one physical property to a measure of radiation; wherein

the sensor comprises a microcantilever connected to a base, where the microcantilever consists of a material or layered materials which converts energy of radiation, if present, into a physical change in the microcantilever; wherein

the microcantilever or layered materials on the microcantilever exhibits a change in elastic modulus upon radiation damage induced by absorption of nuclear radiation.

#### **REMARKS**

Reconsideration and allowance of the claims are requested.

The Examiner's comments have been carefully reviewed. Upon entering the Amendment, claims 1-24 are pending in the application. Claims 1, 10, 17 and 24 have been amended.